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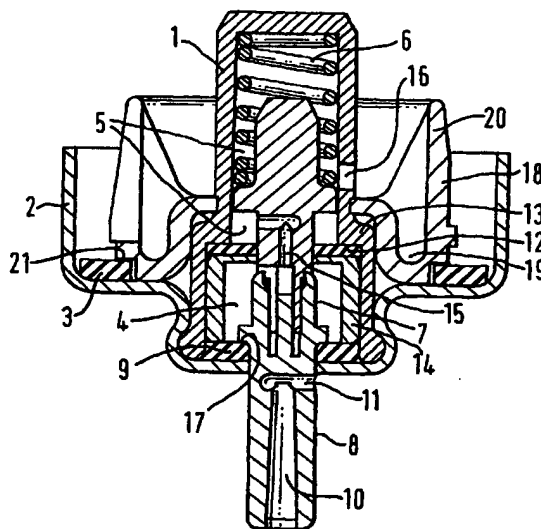
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[Continued on next page]

(54) Title: VALVE



(57) Abstract: There is provided a valve for an aerosol container. The valve comprises a valve body (1), within the valve body (1), a sealing ring (112) and receivable by the sealing ring (112), a valve stem (108) having a dispensing passage (10, 11). The valve stem (108) is slidably movable within the sealing ring (112) from a valve-closed position to a valve-open position in which the interior of the valve body is in communication with the dispensing passage (10, 11). The sealing ring (112) is shaped such as to reduce the contact area between the sealing ring (112) and the valve stem (108). Preferably, the valve is a metering valve.

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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0 870 699 A (MINNESOTA MINING & MFG) 14 October 1998 (1998-10-14) column 9, line 8 -column 11, line 4; figures 2A-I	1-34
Y	WO 99 00315 A (BURT PETER COLIN WESTON ;GLAXO GROUP LTD (GB)) 7 January 1999 (1999-01-07) page 5, line 1 -page 6, last paragraph; figure	1-34
A	DE 41 23 392 A (WOLF WOCO & CO FRANZ J) 21 January 1993 (1993-01-21) column 5, line 15 -column 6, line 16; figures	1-34
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 1 437 899 A (GEORGE ANGUS & COMPANY LIMITED) 29 July 1966 (1966-07-29) page 2, left-hand column, line 3 -right-hand column, line 22; figures -----	1-34

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Inventor: International Application No

PCT/EP 00/01444

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0870699 A	14-10-1998	AU 698364 B	29-10-1998
		AU 5185396 A	02-10-1996
		CA 2213442 A	19-09-1996
		DE 69609315 D	17-08-2000
		EP 0813490 A	29-12-1997
		JP 11501892 T	16-02-1999
		WO 9628367 A	19-09-1996
		US 5772085 A	30-06-1998
WO 9900315 A	07-01-1999	GB 2329939 A	07-04-1999
		AU 8339198 A	19-01-1999
		CN 1259919 T	12-07-2000
		EP 0991578 A	12-04-2000
		NO 996463 A	10-02-2000
DE 4123392 A	21-01-1993	NONE	
FR 1437899 A	29-07-1966	NONE	